

# PS12E-I INFRASUB™

SELF-POWERED

## APPLICATIONS

Laboratory Reference System	House of Worship
Recording Studio and Mastering	Theatrical Sound Reinforcement
Post Production and Screening Room	Installed Audio-Visual Systems
Restaurant Foreground Music Systems	Nightclub Installation

## DESCRIPTION

The PS12E-I is a self-powered single 12" bass system designed for permanent installation. The PS12E-I provides perfectly flat response down to 8 hertz when used in conjunction with the 8 hertz Integrator. Our external rack mount Infra-MXB Integrator is recommended to drive a line level Infra™ processed signal to one or more PS12E-I systems. The PS12E-I offers a black textured finish, a black coated steel grille and optional fly points.

The audio input incorporates an InGenius® balanced line receiver, providing very high common mode rejection, to eliminate noise often present in systems with less optimized grounding and wiring schemes. The internal Minima 7™ amplifier incorporates a high efficiency low power consumption green design with advanced digital switching to automatically switch and accept line voltage from 100 to 240 volts.



## SPECIFICATIONS

### System Type:

Infrasub™ sealed chamber 1.4 ft<sup>3</sup>

### Enclosure:

18 mm 13-ply birch plywood

### Finish:

Black Ro Tex™ true water born environmental finish

### Grille:

16 Gauge black powder coated perforated steel

### Low Frequency Components:

EL-12B 12" Extended transducer, Infra™ cone, 2.5" Voice coil, 80 oz Magnet

### Input Connector:

XLR 1/4" combo with XLR loop through

### Internal Amplification:

Minima 7™

### Input Impedance:

48K ohms

### Input CAL Sensitivity:

+4 dBu

### Maximum Continuous Amplifier Power:

750 W

### High Pass Filter:

Switchable: -6 dB @ 8 Hz; @ 50 Hz; @ 95 Hz

### Overload Protection:

Internal Dynamic Filter™ protection

### LED Indicators:

Green - On

Yellow - Dynamic filter threshold

### Mains Voltage Requirements:

Auto sensing  
100 / 120 / 240 V

### Mains Current Requirements:

2.3 A @ 120 V

1.2 A @ 240 V

### Hardware:

Optional fly points

Optional steel yoke U-bracket

### Fly Points Safe Working Load:

200 lbs

### Crossover Type:

Requires external Infra™ integrator

### Frequency Response:

60 Hz to 250 Hz ±3 dB

8 Hz to 95 Hz ±3 dB with external Infra™ integrator

### Low Frequency Limit:

8 Hz

### Maximum Calculated Continuous Acoustic Output:

Half Space @ 1 Meter

10 Hz - 81 dB SPL

20 Hz - 93 dB SPL

40 Hz - 105 dB SPL

80 Hz - 116 dB SPL

### Polarity:

A positive asymmetrical signal applied to pin 2 will result in a positive asymmetrical acoustical pressure

### Dimensions:

15" h x 18" w x 15" d

39 cm x 46 cm x 39 cm

### Weight:

40 lbs

18 kg

### Custom Finishes:

Optional custom finishes include white or unfinished ready to paint.

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# PS12E-I INFRASUB™

## About INFRASUB™ Technology

Almost all designs and specifications for subwoofer systems are fixated on the frequency response domain. However, the impression of power and quality of a loudspeaker is equally related to the time domain. The long wavelengths associated with low frequencies make this particularly true with subwoofers. Likewise, the maximum SPL is not a very reliable way to judge the impact of a subwoofer. A poor time domain performer will not have the same impact or natural musically connected sound as a Time-Aligned™ Infra™ system. The reason that an Infra™ subwoofer sounds dramatically better is because of their superior time domain performance, as well as their extended low frequency response. The Infra™ subwoofer maintains the bass energy in a tight packet, aligned with the upper range signal, providing a greater body impact and a seamless musical connection with the main loudspeakers. Conventional subwoofer designs perform poorly in the time domain because designers have used methods that sacrifice the phase response for more control over the frequency response (e.g.: steep low pass filter slopes, vented speaker enclosures, and narrow bandwidth systems). With the Infra™ technique, we do not degrade the phase response while extending the frequency response.

While the Infra™ dual Integrator does function as the system crossover, it does so without using a conventional low pass filter. The Infra™ integrator applies an inverse electrical response to the acoustical response of the Infra™ loudspeaker in its sealed enclosure. This provides the extended frequency response while maintaining the hi fidelity sound quality associated with a sealed box design. This design approach requires the most amplifier power to be used at the lowest frequency, thus we implement the Dynamic Filter™ technology to protect the system from the bottom up, affecting the lowest frequency first and leaving the middle and upper bass unaffected. The Dynamic Filter™ is a complimentary technology to the Infra™ system taking unique advantage of the Infra™ design approach, to implement a reliable protection scheme that is transparent and inaudible to the listener. When comparing a genuine Bag End® Infra™ loudspeaker system to any other, our technology and design is easy to hear and appreciate. The dramatic clarity, realism, and overall pleasant sound of an Infra™ system is well noted throughout the world.

## About Minima 7™ Self Powered

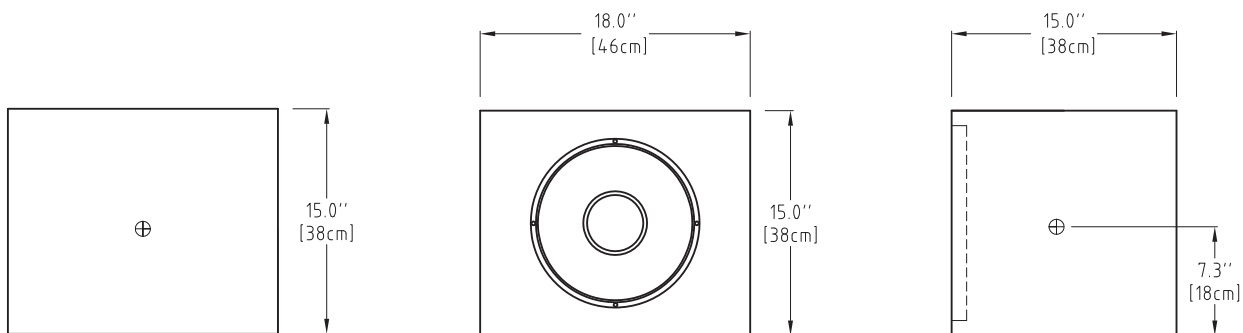
The Minima 7™ amplifier is both a high fidelity and a high efficiency amplifier. With efficiency well over 80%, it provides more power to the loudspeakers, and creates

less heat in the amplifier. In real world applications there is practically no heat emitted from the amplifier and thus it requires no cooling fan. The AC power input automatically adapts to any voltage between 88 and 270 volts.

## About Dynamic Filter™

The Dynamic Filter™ is a complimentary technology to the Infra™ system taking unique advantage of the Infra™ design approach, to implement a reliable protection scheme that is transparent and inaudible to the listener. Systems using the external rack mount Infra-MXB processor require an appropriate threshold adjustment that sets the amplifiers power and sensitivity to the Infra™ loudspeakers in use. When a system is asked to do more than it is capable of, or if an accidentally large signal is presented the threshold of the Dynamic Filter™ is crossed and the system protects itself from the bottom up by reducing the lowest frequencies first. Since the most power and excursion is always required at the lowest frequency, reducing the level of the lowest frequencies first avoids an overload, while at the same time the system is able to reproduce the middle and upper bass and leave the upper crossover region unaffected. This is a very natural and inaudible method to protect the system and unique to the Infra™ technology.

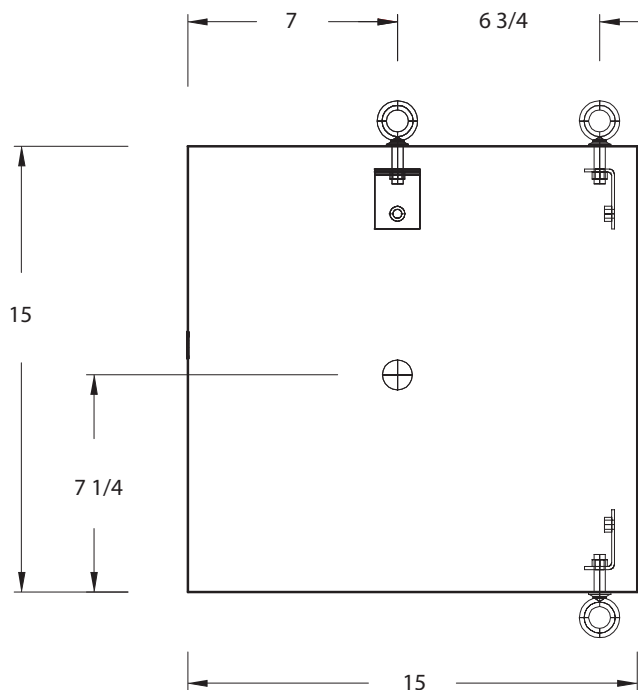
## DIMENSIONS



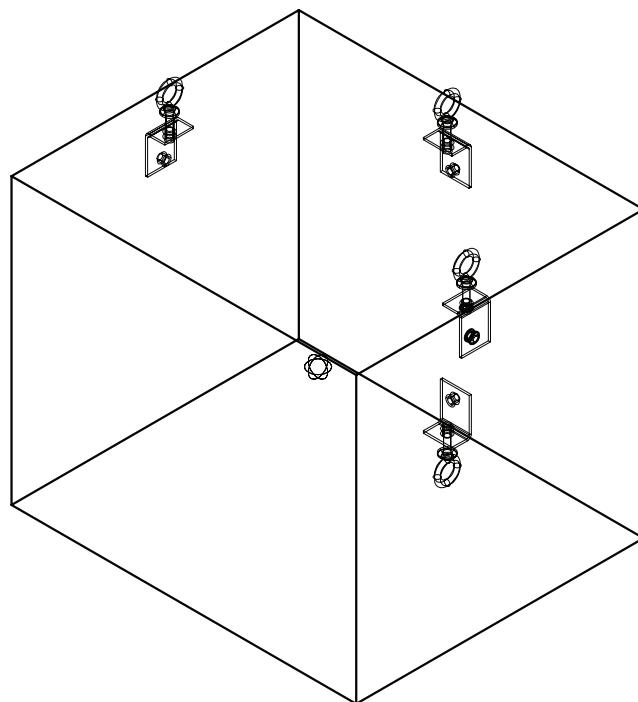
⊕ = Center of Gravity

# PS12E-1 INFRASUB™

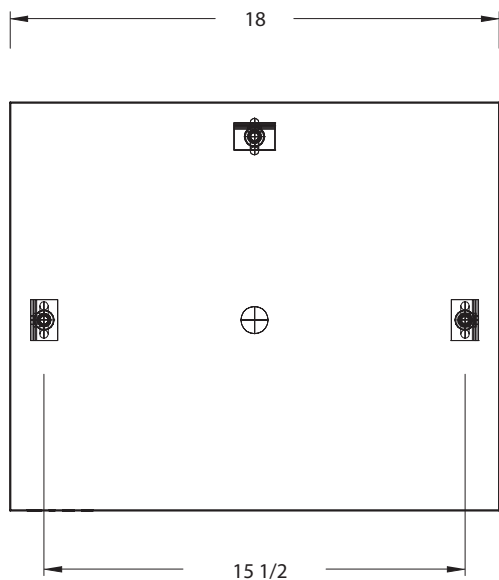
## SIDE VIEW



## ISOMETRIC VIEW



## TOP VIEW



## Key

Center of Gravity: +

## Warnings

Mounting and rigging loudspeakers requires experienced professionals. Improperly installed loudspeakers can result in property damage, personal injury, death and/or liability to the installing contractor.

## Flypoints

Optional hardware includes 5/16-18 threaded flypoints as shown.